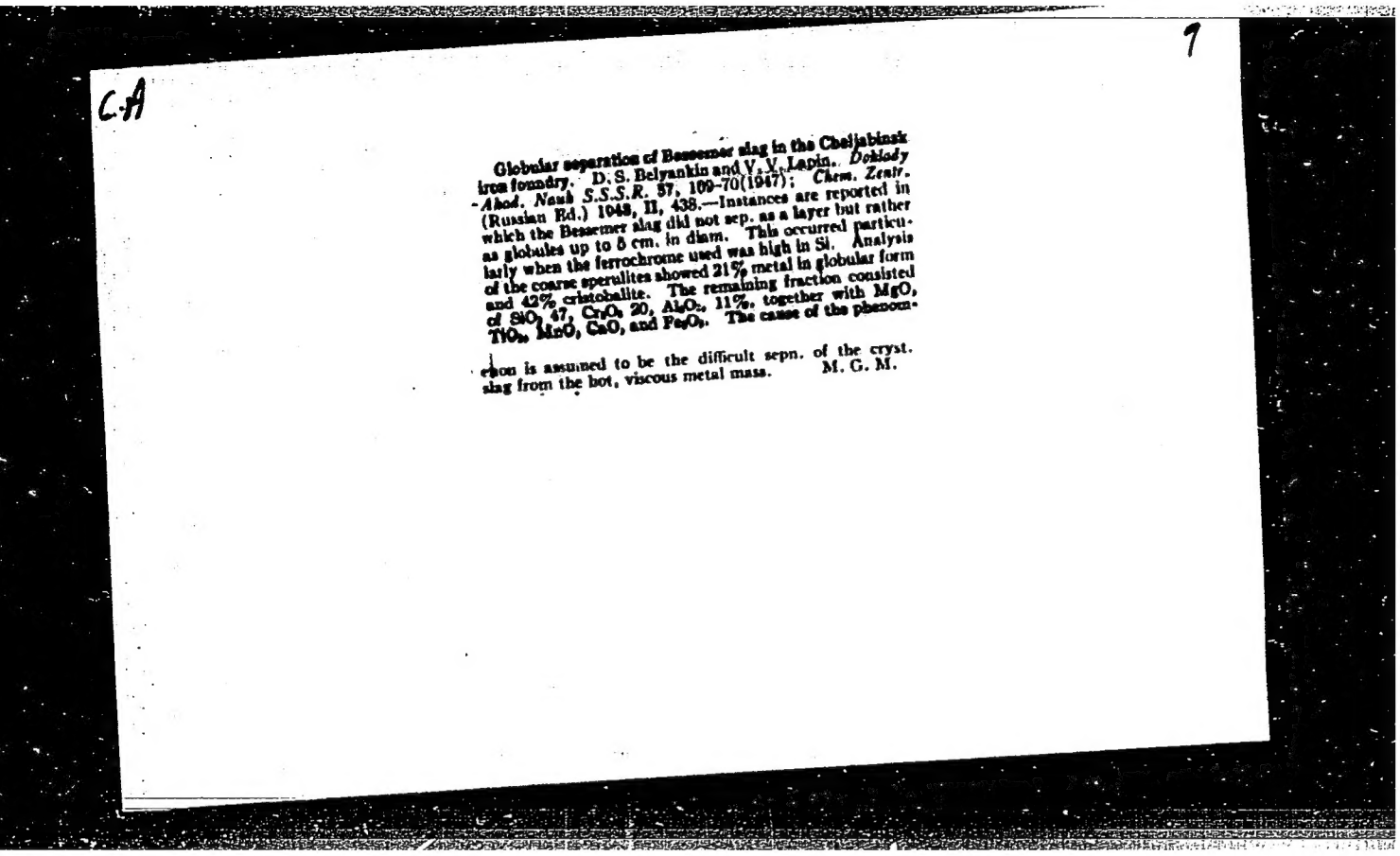


C.A

7

Globular separation of Bessemer slag in the Cheljabinsk iron foundry. D. S. Belyankin and V. V. Lapin. *Doklady Akad. Nauk S.S.S.R.* 57, 169–70(1947); *Chem. Zentr.* (Russian Ed.) 1948, II, 438.—Instances are reported in which the Bessemer slag did not sep. as a layer but rather as globules up to 6 cm. in diam. This occurred particularly when the ferrochrome used was high in Si. Analysis of the coarse sperulites showed 21% metal in globular form and 42% cristobalite. The remaining fraction consisted of SiO_2 47, Cr_2O_3 20, Al_2O_3 11%, together with MgO, TiO_2, MnO, CaO, and Fe_2O_3. The cause of the phenomenon is assumed to be the difficult sepn. of the cryst. slag from the hot, viscous metal mass. M. G. M.

LAPIN, V. V.

21 Mar 1948

USSR/Engineering
Glass Industry
Glassmaking Materials

"Crystallization of Cordierite in Industrial Glass—One of Its New Defects," D. S. Belyankin, Acad; V. V. Lapin, 2½ pp

"Dok Akad Nauk SSSR, Nova Ser" Vol LIX, No 9

In studying defects in products of a glassworks, original crystallization discovered in piece of glass which on first impression taken for new formation of nephelin in the glass. Closer study revealed that it was not nephelien, but cordierite. Presents complete study of crystallization.

PA 51T11

LAPIN, V. V.

USSR/Metals
Metallurgy
Slags

May 1948

"Mervinite and $2CaO \cdot SiO_2$; Their Paragenesis in One of the Slags of Ferrovanadium Production," Academician D. S. Belyankin, V. V. Lapin, 4 pp

"Dok Ak Nauk SSSR" Vol LX, No 5

Results of microscopic studies of various samples. It was determined that two samples studied contained same quantity of minerals but quality varied. Results obtained in studies can be adopted for use in constructing diagrams for $CaO-MgO-SiO_2$ in connection with problem of utilizing metallurgical slag as technological bonding agents. Submitted 17 Mar 1948.

PA 68T92

CA

8

Synthetic alumina. D. S. Belyankin and V. V. Lapin. *Zapiski Vsesoyuz. Mineral. Obshchestva* (Mém. soc. russe minéral.) **77**, 65-9(1948).—Microscopic details of different alumina products, prepd. from an industrial electro-corundum ("Korax") and a layer alumina are described, and chem. analyses given. The presence of β-Al_2O_3 indicates the notable CaO and alkali content; up to 20% β-corundum is observed, confirmed by x-ray analysis. Thermal analysis detected two endothermal effects, characteristic of gibbsite and boehmite in the hydrous industrial products. The x-ray analysis confirmed the presence of α-corundum, β-alumina, boehmite, and γ-alumina. The microstructure of corundum insulator bodies is described, esp. their content in glass and gas inclusions. W. E.

LAPIN, V. V.

26415 Mineralogicheskiy analiz portandtsementnogo klinkera v polirovannykh shlifakh. Sbornik nauch. Rabot po vyazhushchim materialam. M, 1949, s. 123-27.

SO: LETOPIS' NO. 35, 1949

PA 56/49T36

USSR/Engineering Jun 49
Refractomes
Ceramics

"Review of P. P. Budnikov and A. S. Berezhna's Book, 'Reactions in the Solid Phase,'" V. V. Lapin, Cand Geol and Mineral Sci, 3 pp

"Ogneupory" No 7

Since reactions in the solid phase are used widely in the ceramics industry, this book is considered very timely. It is small (86 pp) but replete with valuable information. Refers to work by Nelyankin, Chervinskiy and Tsynkina in this field. Brief

56/49T36

USSR/Engineering (Contd) Jun 49

section on magnesium titanate refractories which are widely used in electrotechnical ceramics. Book is of great scientific and practical value, and will be valuable for technicians and engineers of the silicate industry.

56/49T36

LAPIN, V. V.

LAPIN, V. V.

USSR/Metals Apr 49
Aluminum
Titanium

"Lower Titanium Oxides in Slags Produced by Aluminothermy," Acad D. S. Belyankin, V. V. Bogolynbov, V. V. Lapin, 4 pp

"Dok Ak SSSR" Vol LXV, No 5

Assumes the following three processes must occur during aluminothermy (1) $3TiO_2 + 4Al = 3Ti + 2Al_2O_3$, (2) $6TiO_2 + 2Al = 3Ti_2O_3 + Al_2O_3$, and (3) $3TiO_2 + 2Al = 3TiO + Al_2O_3$. States that expenditure of 0.188 kg of aluminum per kg titanium is required for reduction of titanium dioxide to sesquioxide according to reaction (2), which is confirmed in practice. Attempts to determine mineralogical forms in which these oxides are contained, and also to decide if some other nonoxygenous compound of titanium emerges, particularly titanium nitride (TiN), which also is stable at high temperatures.

Submitted 17 Feb 49

PA 39/49T92

LAPIN, V.V

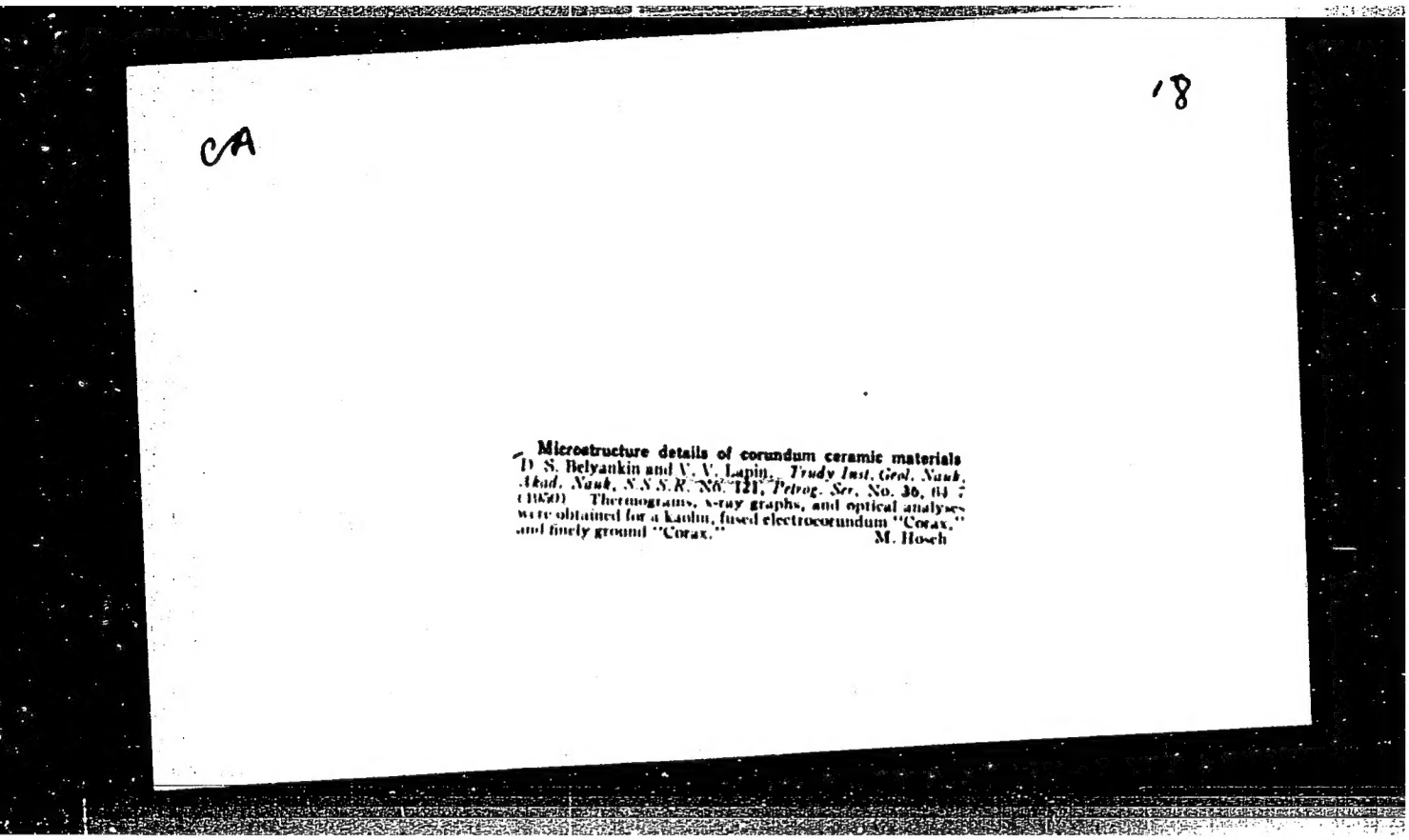
Silicates

Liquefaction of some phosphorus and fluorine containing silicate fusion. Trudy Inst. geol. nauk AN SSSR No. 106, 1949

Monthly List of Russian Accessions, Libraryof Congress, December, 1952 UNCL.

LAPIN, V. V.

Zirconlum dioxide in mullite refractory. D. S. Belyankin and V. V. Lapin. Doklady Akad. Nauk S.S.S.R., 73 [2] 367-69 (1950).--Mullite refractory, made by the electric melting of a charge of kaolin, bauxite, and Zr concentrate, was subjected to chemical and petrographic analyses. The Zr was assimilated by the melt and forn ad crystals of ZrO_2, the well developed skeletons of which filled the microstructure of the refractory. The mullite had a characteristic pleochroism, from colorless to azure, with a higher index of refraction ($n_a = 1.659$ and $n_y = 1.678$) than normal mullite. In transmitted light, the glass was slightly brownish; index of refraction was not constant. This glass should be rich in silicic acid compared with mullite. In transmitted light, the ZrO_2 appears as small chains and branches of prominent crystallites, of pyramidal-octahedral shape and birefracting with crossed Nicols. The index of refraction was over 2.00 which is close to that of baddeleyite. Corundum had its usual optical characteristics, but it showed crystals and fragments of crystals. The general impression was that the corundum separated from the charge first at maximum temperatures but, upon cooling. it lost its equilibrium with the melt and reacted with it. The ZrO_2 can improve the refactory, but the structure is not sufficiently uniform. 2 photomicrographs. B. Z. K.



CA

18

Microstructure details of corundum ceramic materials
D. S. Belyankin and V. V. Lapin. *Trudy Inst. Geol. Nauk, Akad. Nauk, S.S.S.R.* No. 121, *Petrog. Ser.* No. 36, 84 pp. (1950). Thermograms, x-ray graphs, and optical analyses were obtained for a kaolin, fused electrocorundum "Corax," and finely ground "Corax."
M. Hoseh

LAPTY, V.V.

Petrology

Development of technical petrography in the years of Stalin's five-year plans., Izv. AN SSSR Ser. geol., no. 6, 1951

MONTHLY LIST OF RUSSIAN ACCESSIONS. Library of Congress, March 1952. UNCLASSIFIED.

C.A.

New mineral formed in weathering ferro-V slags. D. S. Belyankin and V. V. Lapin. *Doklady Akad. Nauk S.S.S.R.* 78, 107–10(1951); cf. C.A. 43, 1691c.—The Fe-V slag in question has higher Al_2O_3 (7.75%) and lower SiO_2 (28.5%) contents than previously described basic slags of about the same CaO (49.4%) and MgO (12.1%) contents. Microscopic examn. showed merwinite, β- and γ-Ca_2SiO_4, little MgO, monticellite, gehlenite, and very little spinel and metal as mineral components. The slag is inclined to dusting by the β → γ inversion of Ca_2SiO_4, and shows at free air-exposed surface an addnl. slow disintegration. A mineral powder is formed with $\gamma = 1.561$; $\alpha = 1.547$; $\gamma-\alpha = 0.013$ to 0.015. Calcite and γ-Ca_2SiO_4 are entirely absent in these products. The mineral shows a radial extinction of the granular aggregates, sometimes with polysynthetic twin networks. The x-ray diagram shows a close similarity with $Ca(OH)_2$, which, however, shows $\omega = 1.574$; $\epsilon = 1.545$; $\epsilon-\omega = -0.029$. The chem. compn. was calcd. after the deduction of some merwinite, Ca_2SiO_4, MgO, $CaTiO_3$, FeO, and V_2O_3 spinel. The ignition losses are max. at 500–600°. Most probable would be a CaO hydrate with 4.5 to 17 mol. % $CaCO_3$; excess CaO and Al_2O_3 are uncertain in their role. In the slag, no free CaO was detd., while the disintegration product shows 20 wt. % of it. The real nature of the newly formed compd. is uncertain. W. E.

LAPIN, V. V.

Mineralogy of anosovite. D. S. Belyankin and V. V. Lapin. Doklady Akad. Nauk S.S.S.R. 80, 421-4(1951); cf. Rusakov and Zhdanov, C.A. 45, 6452a; Sigurdson and Cole, C.A. 44, 1318h.--Anosovite is the name for the synthetic crystal phase of the compn. $TiO.2TiO_2$ occurring in Ti-rich blast-furnace slags. The orthorhombic elementary cell is a_o = 3 '47; b_o = 9.466; c_o = 9.715A. The mineral isolated from the slags is usually not pure but a solid soln. with(Mg, Fe, Mn)0,$2TiO_2$; some excess TiO_2, and Al_2O_3.-TiO_2, as calcd. from the chem. analyses. The excess of TiO_2, as calcd. from the chem. analyses. The excess of TiO_2 in $MgO.2T O_2$ may go up to a mol. ratio MgO; TiO_2 = 1:4.4. Crystals of a synthesis at 1300 to 1400° are described; black crystals, with sp. gr. about 4.16: = 2.32 0.05; = 2.19 0.03. By heating in open air to 800 to 900°, free rutile is formed. The microscopic examn. of Ti slags (with 28 to 32% SiO_2; 30.6 to 31.6% TiO_2; 17-18% CaO; about 3% FeO; 3.4% MgO) showed abundant sphene (n about 1.923) and anosovite in a dark glass (n = 1.55 to 1.56), the latter mineral as acicular phenocrysts. The x-ray powder diagrams of anasovite and $MgO.2TiO_3$ are nearly identical in the calcd. d.-spacings. W. Eitel

LAPIN, V.V.

The Committee on Stalin Prizes [of the Council of Ministers USSR] in the fields of science and inventions announces that the following scientific works, popular scientific books, and textbooks have been submitted for competition for Stalin Prizes for the years 1952 and 1953. (Sovetskaya Kultura, Moscow, No. 22-40, 26 Feb - 5 Apr 1954)

Name	Title of Work	Nominated by
Belyankin, D.S. Ivanov, B.V. Lapin, V.V.	"Petrography of Engineering Stone"	Institute of Geological Sciences, Adademy of Sciences USSR

SO: W-30604, 7 July 1954

LAPIN, V V

Petrography of Technical Stone (Petrografiya tekhnicheskogo kamnya). D. S. BELYANKIN, B. V. IVANOV, AND V. V. LAPIN. Published by Academy of Sciences, U.S.S.R., Moscow, 1952. 333 pp. Price R35.20. Reviewed in *Steklo i Keramik*, 9 [9] 23-24 (1952).—The book has sections on refractory materials, slags, bonding materials, and ceramic materials. It is profusely illustrated (381 figures), but it has no subject or author index.

B.Z.K.

LAPIN, V.V.

Creation and development of technical petrography in the Soviet Union. Trudy Inst.ist.est. 4:381-393 '52. (MLRA 6:7)
(Mineralogy)

LAPIN, V. V.

USSR/Engineering - Petrography Dec 52

"Review of 'Petrography of Technical Stone,'"
(reviewed by P. P. Budnikov)

Ogneupory, No 12, pp 568-571

Review of "Petrografiya Tekhnicheskogo Kamnya," by Acad D. S. Belyankin, B. V. Ivanov, and V. V. Lapin, published by Acad Sci USSR, 1952, 583 pp. According to reviewer, book is first work on problems of technical petrography. States this independent branch of petrographic science was created by Soviet scientists in answer to requirements of industry. Book is purposely limited to information on major and well studied varieties of tech stone--refractories, ceramic products, slags, nonmetallic inclusions in steel, binders, and components of industrial glass. Other types, such as abrasives, glazes, enamels, and silicate and red bricks, will be included, acc to authors' intention, in next edition. Based mainly on original investigations by authors, book shows general progress of tech petrography, reviewing other works of Soviet scientists. Authors also use, for sake of completeness, some non-Soviet sources, criticizing their incorrectness and unsubstantiated conclusions. Bibliography includes 959 titles. Reviewer evaluates book highly, stating that Acad Belyankin is considered creator of tech petrography in Soviet Union, and two co-authors are his closest followers, having worked with him in field of tech petrography for more than 20 years.

267T69

LAPIN, V.V.

Zirconium dioxide - new type of stone in glass. Doklady Akad. Nauk S.S.S.R. 84(3)567-9 '52. (MLRA 5:6)
(CA 47 no.19:10188 '53)

LAPIN, V. V.

AFANAS'YEV, G.D., doktor geologicheskikh-mineralogicheskikh nauk, redaktor; BARSANOV, G.P., redaktor; VOROB'YEVA, O.A., redaktor; ZAIESSKIY, B.V., redaktor; LAPIN, V.V., redaktor; LEBEDEV, A.P., redaktor; NALIVKIN, V.V., akademik, redaktor; PETROV, V.P., redaktor; TSVETKOV, A.I., redaktor; DOLGOPOLOV, N.N., sostavitel'.

[Problems in petrology and mineralogy] Voprosy petrografii i mineralogii. Vol. 2, Moskva, 1953. 496 p. (MLRA 7:4)

1. Akademiya nauk SSSR. (Petrology) (Mineralogy)

AFANAS'YEV, G.D., doktor geologicheskikh-mineralogicheskikh nauk, redaktor; BARSANOV, G.P., redaktor; VOROB'YEVA, O.A., redaktor; ZALESSKIY, B.V., redaktor; LAPIN, V.V., redaktpr; LEBEDEV, A.P., redaktor; NALIVKIN, V.V., akademik, redaktor; PETROV, V.P., redaktor; TSVETKOV, A.I., redaktor; DOLGOPOLOV, N.N., sostavitel'.

[Problems in petrology and mineralogy] Voprosy petrografii i mineralogii. Vol. 1, Moskva, 1953. 515 p. (MIRA 7:4)

1. Akademiya nauk SSSR. (Petrology) (Mineralogy)

LAPIN, V.V.

Physicochemical systems in silicate technology. (In: Soveshchanie po eksperimental'noi mineralogii i petrografii. 4th, Moscow, 1952. Trudy, Moskva, 1953. No.2, p.37-46). (MLRA 7:3)

1. Institut geologicheskikh nauk Akademii nauk SSSR.
(Silicates) (Systems (Chemistry))

USSR

Chemical-mineralogical characteristics of a zirconia-mullite refractory from a glass tank furnace. V. V. Lapin. *Voprosy Petrog. i Mineral., Akad. Nauk S.S.S.R.* 2, 367–78 (1953).—$ZrSiO_4$ is decompd. by the melt of electrocast mullite glass tank blocks, and forms ZrO_2 skeletons which are dispersed in the glass (cf. *C.A.* 45, 5897*a*). The life of a Zr mullite brick is considerably inferior to that of ordinary electrocast mullite blocks. ZrO_2 + mullite is accompanied by corundum and a Ti ore mineral observed in the Zr mullite brick after service in the tank. The blocks show a distinct zonal structure with ZrO_2 and β-corundum in the hot zone. Na_2O is distinctly enriched by migration in the direction of the temp. gradient. In the hottest zone mullite entirely disappears, the corundum is corroded by the melt, and ZrO_2 shows sharp dendritic forms. The latter is also enriched in a whitish "reaction layer" between the refractory brick and the glass melt, together with Na β-corundum and a brown reaction glass. The refractory indexes of the β-corundum (ω = 1.676; ϵ = 1.038) are normal; those of ZrO_2 (γ = 2.24; α' = 2.14) are higher than usual (2.20 and 2.13). K_2O and MnO are relatively enriched in the reaction glass in the refractory brick, evidently derived from the fuel. Nepheline is a typical reaction silicate crystd. in contact with the glass. The presence of β-corundum in "stones" from fireclay brick material in the glass melt has been described by Belyankin (*C.A.* 35, 8237[1]) and Bor (*C.A.* 45, 1317*d*).

W. Eitel

LAPIN, V. V.

262T42

USSR/Geology - Obituary

Jul/Aug 53

"Academician Dmitriy Stepanovich Belyankin (Obituary)," G. D. Afanas'yev, B. P. Belikov, O.A. Vorob'yeva, B. V. Zalesskiy, V. V. Lapin, V. P. Petrov

Iz Ak Nauk SSSR, Ser Geol, No 4 pp 5-12

Announce demise of D. S. Belyankin (23 Aug 1876-20 Jun 1953), prominent geologist and petrographer of USSR.

LAPIN, V.V., doktor geologo-mineralogicheskikh nauk.

Technical petrography. Nauka i zhizn' 20 no.6:19-21 Je '53. (MLRA 6:6)
(Stone, Artificial)

LAPIN, V. V.

Fuel Abst.
Vol. 15 No. 4
Apr. 1954
Steam Raising and
Steam Engines

3050. PROPERTIES OF AGGLOMERATED FIREBOX SLAGS AND CINDERS. Lapin, V.V. and Elinzon, M.P. (Ezvolt. Prom. (Constr. Ind.), 1953, vol. 31, (6), 37, 38; abstr. in Chem. Abstr., 1953, vol. 47, 11691). Firebox combustion residues contain coked coal particles, unburned coal, sulphides, unburned and burned clay particles, and similar substances. This material after being subjected to agglomeration calcination to burn off combustibles and dead burn the clay makes a suitable filler for light duty concrete. C.A.

Institut geologicheskikh nauk AN SSSR.

LAPIN, V. V.

Chemical Abst.
Vol. 48 No. 6
Mar. 25, 1954
Metallurgy and Metallography

Phase changes of lime-chromite slags. Soluble lime in lime-chromite slags. D. S. Belyankin and V. V. Lapin. *Doklady Akad. Nauk S.S.S.R.* 91, 911–14(1953); *Chem. Abstracts* 4, 649–50(1953).—CaO-rich Cr-slags produced in the metallurgical process of ferrochrome melting are given in the example of two converter slags. The chem. analyses show the mol. ratios $CaO:Cr_2O_3 = 4.7$ and 2.2. The first of these slags showed in the microscopic examn. α-CaO, Cr_2O_3, in thin, uniaxial plates, pleochroism in green color shades, $\gamma' = 2.17$ and $\alpha' = 1.89$. Further, a green Cr-spinel ($n = 2.09$), perhaps monticellite, and CaF_2. The second slag is high in Fe_2O_3, which also enters the Ca-chromite cryst. phase ($\gamma = 2.21$; $\alpha = 1.023$, pleochroism yellow-and red-brown), besides β-Ca_2SiO_4, a few grains of MgO, CaF_2, and an unidentified silicate ($\gamma = 1.709$; $\alpha = 1.700$). Treated with distd. H_2O, 11–16% CaO is leached from the slag. The x-ray diagram of the residue shows α-CaO. Cr_2O_3 was unchanged (after 18 days); also free CaO is not hydrated, evidently by an effective stabilization by the Fe and Mn oxides present in the slag. The origin of the leachable CaO, especially in a distinct cryst. phase, is still an unsolved problem.

W. Eitel

LAPIN, V.V.

Red spherolite in green glass. M. A. Fedorovov and V. V. Lapin. *Doklady Akad. Nauk S.S.S.R.*, 92 [2] 389-91 (1953).—Red spherolites up to 25 to 30 mm. in diameter were observed in green glass. The spherolites were surrounded closely by the green glass. On the basis of SiO_2, CaO, and Na_2O content, the spherolites and glass were similar; the main difference was in the degree of oxidation of Cu—in spherolites Cu_2O and in glass CuO. The spherolites were a three-phase substance consisting of (1) crystals of $Na_2O \cdot 2CaO \cdot 3SiO_2$, (2) Cu_2O, and (3) intraspherolite glass.

B.Z.K.

LAPIN V.V.

BELYANKIN, D.S.; LAPIN, V.V.; TOROPOV, N.A., doktor tekhnicheskikh nauk, redaktor; TSVETKOV, A.F., doktor geologo-miner. nauk, nauchnyy redaktor; SOKOLSKIY, I.F., redaktor; PANOVA, L.Ya., tekhnicheskiy redaktor.

[Physical chemistry and technology of silicate systems] Fiziko-khimicheskie sistemy silikatnoi tekhnologii. Pod red. N.A.Toropova. Moskva, Gos. izd-vo lit-ry po stroitel'nym materialam, 1954. 370 p. (Silicates) (Systems (Chemistry)) (MLRA 7:12)

LAPIN, V. V.

Chem.

Chemical Abst.
Vol./48 No. 9
May 10, 1954
General and Physical Chemistry

Dmitrii Stepanovich Belyankin, P. P. Budnikov, A. S. Berezhnoi, O. K. Botvinkin, S. S. Davydov, Kh. O. Gevorkyan, K. E. Goryainov, V. P. Kupriianov, I. I. Kitaigorodskii, V. G. Kukolev, V. V. Lapin, A. A. Litvakovskii, V. M. Moskvin, S. A. Mironov, V. A. Mchedlov-Petrosyan, R. L. Peyzner, B. G. Skramtaev, V. N. Vung, and M. O. Yushkevich. *Zhur. Prikład. Khim.* 27, 3–4(1954).—Obituary with portrait and summary of scientific work in phys. chemistry and the silicates.
G. M. Kosolapoff

9-2-54 GMK

LAPIN, V. V.

USSR/Chemistry - Chemical Technology

Card : 1/1

Authors : Lapin, V. V.

Title : The mineralogy of alumino-barium slags

Periodical : Dokl. AN SSSR, 96, Ed. 5, 1037 - 1039, June 1954

Abstract : Special characteristics of alumino-barium slags derived during the smelting of alumino-barium alloys are described. The pulverization of the slag is connected with the hydration of the barium oxide, and the turbulent gas separation during the effect of water. Three references. Tables, drawings.

Institution : ....

Presented by: Academician, D. I. Shcherbakov, April 3, 1954

LAPIN V. V.

Some scorched rocks of Central Siberia. A. A. Mehyalov, V. V. Lapin, and A. P. Lebedev. *Izvest. Akad. Nauk S.S.S.R., Ser. Geol.* 1955, No. 3, 108–13.—A study of scorched rocks originating probably as a result of coal fires. Detailed microscopic and chem. analyses of these rocks offered the possibility of indicating their essential differences from amygdaloid basalts and from lavas. G. S. M.

GP (2)

LAPIN, V.V., doktor geologo-mineralogicheskikh nauk.

Some achievements of industrial petrography. Vest. AN SSSR 25 no.10: 32-38 O '55. (Stone, Artificial) (MLRA 9:1)

LAPIN, V. V.

Solubility of sesquioxides in natural and synthetic spinels. V. V. Lapin. *Doklady Akad. Nauk S.S.S.R.* 104, 811–14 (1955). In natural Cr picotite considerable structural defects were observed, leaving 5% of the R^{++} positions empty, corresponding to a relative excess in R_2O_3 in the spinel compn., with a ratio $RO:R_2O_3 = 1:1.25$. Another defect structure was described as "magnalumoxide" of the compn. $(Mg,Fe)_3(Al,Fe)_{10}O_{20}$ (cf. Bobkov and Kazitsyn, *C.A.* 45, 7412*h*). In this mineral the common cations 8 Mg^{++} and 18 Al^{+++} are replaced by 6 Mg^{++} and 18 Al^{+++} in relation to 32 O^{--}, corresponding to a solid soln. of $MgAl_2O_4$ with Al_2O_3. L. describes a titaniferous spinel from a metallurgic slag, with $n = 1.738 \pm 0.002$. This spinel is assocd. with TiO, β-alumina, some sulfide, metal, and a "Mg zirconate" $MgO.3ZrO_2$ (cubic, with $a_0 = 5.07$ A.) or a solid soln. of MgO in ZrO_2 (cf. Duwez, *et al.*, *C.A.* 46, 7299*i*). A recalcn. of the compn. of the spinel in the slag is given; its $a_0 = 7.98$ A. corresponds to the ratio $MgO:Al_2O_3 = 1:2.46$ or 15% MgO and 85% Al_2O_3 (calcd. from the analysis 14% MgO and 86% Al_2O_3). W. Eitel

TSVETKOV, Alekaey Ivanovich; VAL'YASHIKHINA, Yelizaveta Pavlovna; SHCHERBAKOV, D.I., akademik, redaktor; LAPIN, V.V., redaktor; KUN, N.R., redaktor; PAVLOVSKIY, A.A., tekhnicheskiy redaktor.

[Materials on the thermal investigation of minerals] Materialy po termicheskomu issledovaniiu mineralov. No.3: Sliudy. Moskva, Izd-vo Akademii nauk SSSR, 1956. 107 p. (Akademiia nauk SSSR. Institut geologii rudnykh mestorozhdenii, petrografii, mineralogii i geokhimii, Trudy, no. 4) (MLRA 9:10)

(Mica) (Thermal analysis)

LAPIN, Vladimir Vasil'yevich; AFANAS'YEV, G.D., redaktor; TSVETKOV, A.I., redaktor; IVANOV, B.V., redaktor; POLIVANOVA, Ye. B., tekhnicheskiy redaktor.

[Petrography of metallurgical and fuel slags]Petrografiia metallurgicheskikh i toplivnykh shlakov. Moskva, Izd-vo Akademii nauk SSSR, 1956. 323 p. (Akademiia nauk SSSR. Institut geologii rudnykh mestorozhdenii, petrografii, mineralogii i geokhimii. Trudy, no.2) (MLRA 9:10)

1. Chlen-korrespondent AN SSSR (for Afanas'yev).
(Slag) (Petrology)

BELYANKIN, Dmitriy Stepanovich, akademik; IVANOV, B.V., redaktor; LAPIN, V.V., redaktor; TSVETKOV, A.I., redaktor; ASTROV, A.V., redaktor izdatel'stva; MOSKVICHEVA, N.I., tekhnicheskiy redaktor

[Selected works] Izbrannye trudy. Moskva, Izd-vo Akademii nauk SSSR. Vol.1. 1956. 844 p. (MIRA 9:9)
(Petrology)

SOV/137-57-10-18887

Translation from: Referativnyy zhurnal, Metallurgiya, 1957, Nr 10, p 66 (USSR)

AUTHOR: Lapin, V.V.

TITLE: Structure and Phase Constitution of Blast-furnace Slags Considered in Connection With the Practical Utilization Thereof (Stroyeniye i fazovyy sostav domennykh shlakov v svyazi s ikh prakticheskim ispol'zovaniyem)

PERIODICAL: V sb.: Domennyye shlaki v str-ve. Kiyev, Gosstroyizdat UkrSSR, 1956, pp 60-77

ABSTRACT: A study was made of the mineralogy and microstructure of specimens of paving blocks (B) made at the Chelyabinsk Metallurgical Plant by pouring molten blast-furnace slag out of the ladle into iron molds mounted in special casting pits. It is found that the compressive strength of the B is substantially dependent upon its particular mineralogical composition and structure. A most important mineralogical component of slag B is helenite, which may crystallize either as large idiomorphic crystals or as small crystals of indeterminate form, or in skeletal formations. B have also been found to contain pyroxenes, finely-dispersed sulfides, and glass. The greatest

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Structure and Phase Constitution of Blast-furnace Slags (cont.)

compressive strength (up to 1330 kg/cm^2) is that of light gray slag B of fine granular microstructure, the bulk of which consists of a pyroxene mineral (probably augite) and which contains a relatively smaller amount of helenite. Blocks of this type are characterized by a higher alumina content (46.46%) than other specimens investigated. The porosity [void ratio; Transl. Ed. Note] of the slag B, related to the degree of saturation of the slag with gas, has a damaging effect upon its strength. The porosity of light gray B is usually 5.9-18.8%, while the porosity of other types of B sometimes attains 27.6%. A study is also made of the microstructure of slag pumice currently being manufactured at the Magnitogorsk, Kuznetsk, Zhdanov, Yenakiyevo, Tula, and Makeyevka metallurgical plants. It is found that the slag pumice of the eastern plants consists primarily of helenite and pseudo-wollastonite while that from the slags of the southern plants consists of rankinite, pseudo-wollastonite and small amounts of helenite. The structure of slag pumice was also found to contain glass.

Ye.V.

Card 2/2

LAPIN, V.V.

137-1958-2-2288

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 2, p 11 (USSR)

AUTHOR: Lapin, V.V.

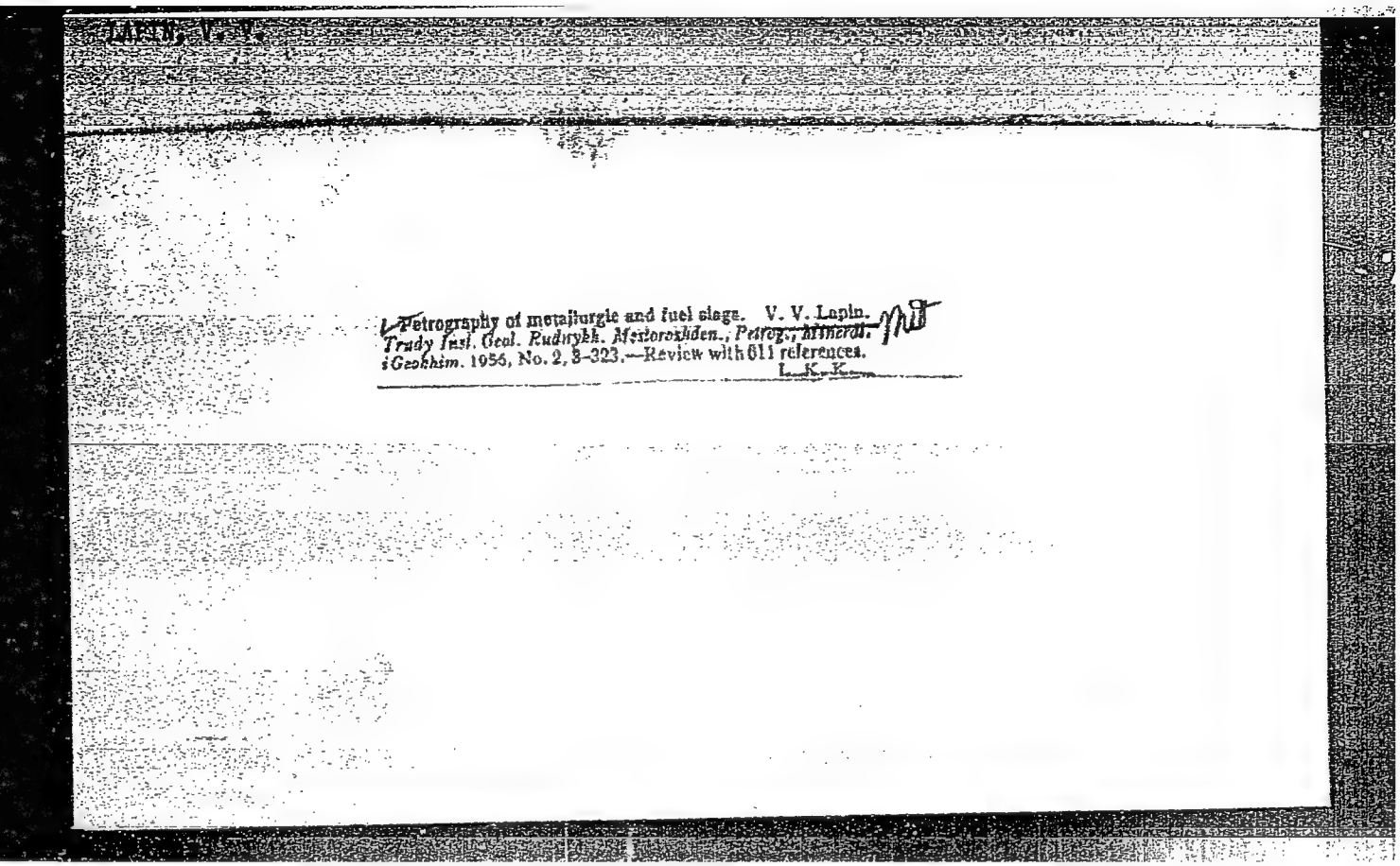
TITLE: The Mineralogy and Some Structural Features of the Principal Varieties of Refractory and Ceramic Materials (Mineralogiya i nekotoryye strukturnyye osobennosti glavneyshikh raznovidnostey ogneuporov i keramiki)

PERIODICAL: V sb.: Fiz.-khim. osnovy keramiki. Moscow, Promstroyizdat, 1956, pp 114-132

ABSTRACT: A survey is made of the phase composition and microstructure of three basic varieties of refractory and ceramic material: Dinas brick, aluminosilicate refractory materials, and the basic refractory materials (magnesite, chrome-magnesite, dolomite, and magnesia-alumina ceramic materials). Accompanying tables list the basic mineral constituents of the ceramic materials, their optical and crystallographic properties, and the ceramic products in which they are most frequently found.
Bibliography: 26 references.

S.G.

Card 1/1 1. Ceramic materials--Properties



LAPIN, V. V.

Petrography of metallurgic and fuel slags. V. V. Lapin. *Trudy Inst. Geol. Rudnykh. Mestorozhden., Petrog., Mineral. i Geokhim.* 1956, No. 2, 3-323.—Review with 611 references.

L. K.

LAPIN, V. V.

15-57-7-9460

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 7, p 106 (USSR)

AUTHOR: Lapin, V. V.

TITLE: Zirconium-Bearing Slags, a New Variety of Industrial Stone (Tsirkoniysoderzhashchiye shlaki - novaya raznovidnost' tekhnicheskogo kamnya)

PERIODICAL: Tr. In-ta geol. rud. mestorozhd. petrogr., mineralogii i geokhimii AN SSSR, 1956, Nr 6, pp 73-94

ABSTRACT: The author investigated slags obtained by melting down alloys of zirconium, iron, and silicon and of these elements plus aluminum. The chief components of these slags are ZrO_2, Al_2O_3, CaO, and MgO. Some of the samples studied, in addition to the indicated oxides, also contained large quantities of silica (34.66 to 35.83 percent). The following phases were recognized: magnesian spinel, calcium dialuminate,

Card 1/3

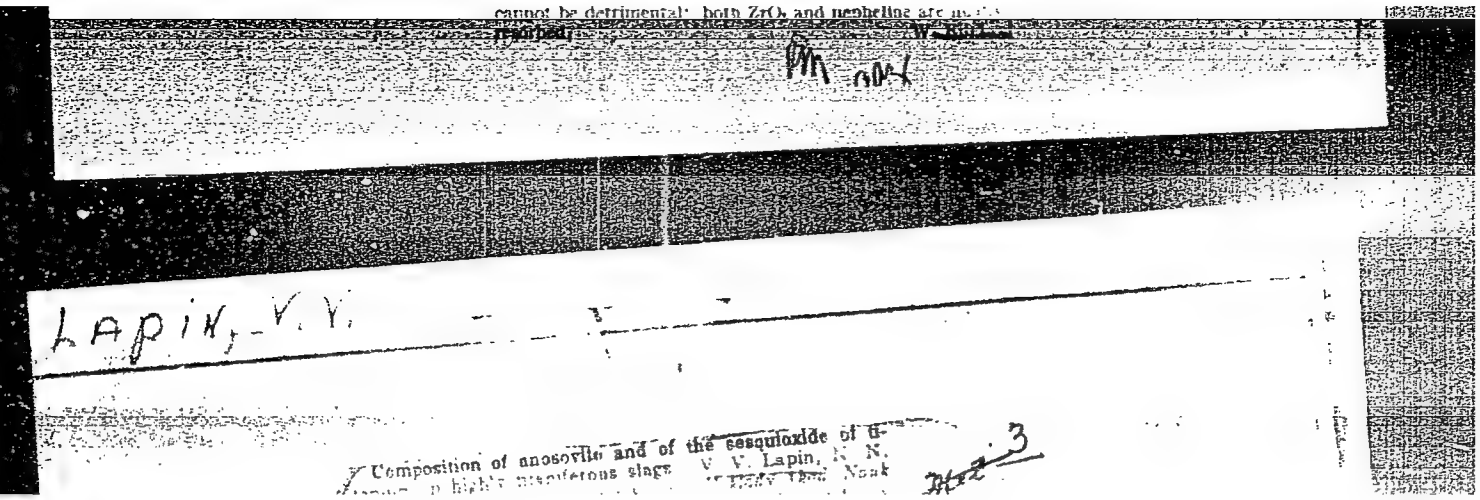
the solid solution of zirconium dioxide. The author explains this phenomenon by the incongruent melting of zircon and also by the stabilization of the zirconium dioxide (previously crystallized) by the admixtures of CaO, MgO, and Al_2O_3. These factors prevent the formation of zircon at low temperatures. Gravitational differentiation was noted in all the slags, with magnesian spinel separating out first. The upper levels of various slag samples contained from 1.8 to 11.2 percent spinel; the lower levels contained from 30.0 to 37.0 percent. The inverse relation was observed for the zirconium mineral: 8.6 to 11.3 percent in the lower part, 15.4 to 17.7 percent above.

Card 3/3

N. N. Kurtseva

LAPIN, V. V.

Microstructure of electrofused baddeleyite-corundum refractories before and after service in a glass fusion furnace. N. V. Solomin, N. M. Galdina, and V. V. Lapin. *Ogneupory* 23, 268-74(1958).—Zircon concentrates and alumina are electrofused and cast to blocks in a pilot plant expt. of the mullite plant of Erevan (Armenia). The product called "Bakor" was examd. in a soda-sulfate glass tank, in comparison with zircon-mullite blocks (cf. Solomin and Galdina, following abstr.); they proved to be much superior to the latter material in corrosion resistance. The microscopic examn. showed corundum and baddeleyite as the characteristic cryst. phases in the structure of Bakor, embedded in a nearly colorless glass (n from 1.606 to 1.613).



cannot be detrimental; both ZrO2 and nepheline are m...

Lapin, V. V.

Composition of anosorite and of the sesquioxide of th... V. V. Lapin, ... N. ... Trans. Nauk ...

LAPIN, V. V., N. N. KURTSEVA and O. P. OSTROGORSKAYA

"On the Mineralogy of High Titanium Slags" p. 273

~~"Synthesis and Structure of Hydrosilicates containing Simple and Complex Heavy Metal Cations." p. 28~~

Transactions of the Fifth Conference on Experimental and Applied Mineralogy and Petrography, Trudy ... Moscow, Izd-vo AN SSSR, 1958, 516pp.

reprints of reports presented at conf. held in Leningrad, 26-31 Mar 1956. The purpose of the conf. was to exchange information and coordinate the activities in the fields of experimental and applied mineralogy and petrography, and to stress the increasing complexity of practical problems.

AUTHOR: Lapin, V.V., Tsvetkov, A.I. 11-58-4-15/16

TITLE: Yakov Iosifovich Ol'shanskiy (deceased)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya Geologicheskaya, 1958, Nr 4, p. 104 (USSR)

ABSTRACT: This is an obituary notice on Ya.I. Ol'shanskiy, Doctor of Chemical Sciences, head of the hydro-thermal and hypergenous experimental laboratory of the Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii i geokhimii (IGEM) AN SSSR (Institute of the Geology of Ore Deposits, Petrography, Mineralogy and Geochemistry of the AS USSR).

Card 1/1 1. Obituaries - Ol'shanskiy, Ya. I.

LAPIN, V.V.

AUTHORS: Lapin, V.V., Kurtseva, N.N. 11-58-5-5/16

TITLE: Differentiation of Silicate Melts Under Industrial Conditions and Their Geologic Significance (Differentsiatsiya silikatnykh rasplavov v proizvodstvennykh usloviyakh i ikh geologicheskoye znacheniye)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya Geologicheskaya, 1958, Nr 5, pp 50-59 (USSR)

ABSTRACT: This article describes the results of a large scale industrial experiment which allowed the phenomena of differentiation of silicate melts of a general petrographic interest to be observed: dressing of the upper part of the melt with iron with the crystallization of ferrous olivine, the formation of a pegmatoid structure, and the formation of the more magnesian olivine in the lower part; settling of unmelted olivine from the shist in the lower part of the slag, its consequent dressing with magnesium oxide, and the large increase of silicate melt, containing the hard phase. The differentiating process in the silicate melts is similar to the process of natural magma, especially important in the study of volcanic activity and the flow of basaltic lava. It was found that the lava flow from the

Card 1/4

Differentiation of Silicate Melts Under Industrial Conditions and Their Geologic Significance

upper part of the crater of a volcano often had a more acid composition than the lava from the lower part of the crater. Their mineral composition was also different. The pyroxene from the lower part of the crater, in comparison with the pyroxene from the upper part, contained less calcium and magnesium. The olivine was more ferrous at the beginning of the flow, and more magnesian at the end. The olivine from the lava which flowed from the lowest part of the volcano contained 10 - 12% of the fayalitic components, and this content increased with the height, reaching 27% at the top of the volcano. A description of the experiments is given. The liquid slag flowing from the water-jacketed furnace was collected in a casting ladle, 2.25 m high. After cooling, the ladle was overturned, the slag broken into pieces, and samples were taken from the upper, middle and lower part. A cavity had been formed in the upper part of the block, surrounded by the coarsely crystalline slag, different from the fine-grained mass of the whole block. Mineralogic composition of the block was the same in all its parts: olivine, hedenbergite, sulfide,

magnetite and glass. The quantity of the olivine and magnetite varies noticeably in different parts of the block (Table 1). The characteristics of olivine and hedenbergite are given. Magnetite was included in the olivines and sulfide, its isolation occurring during the whole crystallizing period. The sulfides were represented mainly by the pyrrhitine and bornite. The constants of refraction of olivine and hedenbergite are given in table 2. They are always the same for hedenbergite, but have noticeable variations for the olivine. The results of a detailed chemical analysis of different parts of the block showed that its upper part contained more silica (Tables 4 and 5). The heterogeneity in the composition of the block occurred during the process of the crystallization of the slag. The crystallizing process started with the isolation of the high melting olivines with a larger content of magnesia. The residual melt, rich in iron, moved to the upper part of the melting ladle. As the crust was formed on the surface of this melt, the gas could not escape, forming the cavity in which the formation

Differentiation of Silicate Melts Under Industrial Conditions and Their Geologic Significance

of crystals of ferrous olivine and magnetite occurred. The authors presume that the same phenomena of differentiation also occurs during crystallization of the basic and ultra basic natural magmas.
There are 8 tables, 8 photos, 2 figures, and 7 Soviet references.

ASSOCIATION: Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii i geokhimii AN SSSR, Moscow (Geological Institute of Ore Deposits, Petrography, Mineralogy and Geochemistry of the AS USSR, Moscow)

SUBMITTED: 18 December 1957.

AVAILABLE: Library of Congress

Card 4/4 1. Silicate-Melting-Analysis

LAPIN, V.V.; KURTSEVA, N.N.; OSTROGORSKAYA, O.P.

Spinel, corundum (ruby), and the peculiar β-alumina in aluminothermic slags. Trudy IGEM no.30:124-134 '58.
(MIRA 12:10)

(Slag)

SOV/136-59-6-9/24

AUTHORS: Lapin, V.V. and Kurtseva, N.N.

TITLE: On the Changes of Oxidised Nickel Ores During Melting in a Stack Furnace (Ob izmenenii okislennykh nikelevykh rud pri plavke v shakhtnoy pechi)

PERIODICAL: Tsvetnyye metally, 1959, Nr 6, pp 51 - 56 (USSR)

ABSTRACT: This article gives the results of a study by the authors of 29 specimens from probes taken from the shaft of an experimental shaft furnace of the Yuzhuralnikel' Combine during the period when it was stopped for repairs. In Figure 1 a sketch of one of the cross-sections of the experimental shaft furnace is shown. The change in temperature along the height of the central portion of the furnace is as follows: the temperature rises slowly from approximately 100 °C at the top of the furnace to 600 °C at a level 1 m from the tuyeres. Below that, it rises rapidly, attaining 1 300 °C in the tuyere zone. The experimental furnace having a cross-section of 7.2 m^2 in the tuyere zone was stopped when the burden was 4.8 m above tuyere level. Blast pressure during the last hours of its work was 1 250 - 1 350 mm water col.

Card1/4

On the Changes of Oxidised Nickel Ores During Melting in a Stack Furnace

A sieve analysis made before the furnace was stopped has shown the following fine fraction (< 20 mm) content of separate constituents of the charge: 13.15% in coke, 26.80% in gypsum, 26.56% in limestone and 74.89% in the agglomerate plus ore. The original ores, as well as the products of high-temperature changes of the ores, the agglomerate, gypsum and final slags were investigated. A chemical analysis of the specimens investigated is given in Table 1. The original ore found at the highest levels of the furnace (3.8 m above the tuyere level) had not changed under the influence of temperature. Probes taken from a region in the centre of the furnace, 1.8 m above the tuyeres, showed no change, thus indicating that the temperature there was below 600 °C. In a probe taken from the same level of the charge but at the periphery of the furnace (specimen 3542-D), the serpentine rock, which had preserved its mesh structure, had changed considerably (Figure 2). The serpentine rock here is practically entirely amorphous; this points to a temperature of < 800 °C. In the peripheral zone of the furnace at a

On the Changes of Oxidised Nickel Ores During Melting in a Stack Furnace

level of 0.3 m above the tuyeres, a very sharp change in the ore is observed (specimen 3553-V - Figure 3). From the nature of the change in the ore (formation of cordierite) it is possible to deduce that the temperature of this zone (0.3 m level) is 1 100 to 1 200 °C. In Figure 4, the specimen 3553, taken 0.3 m from the tuyere level, is shown. Here, coarse pyroxene grains can be seen in the interstices of which there are elongated, skeleton-like crystals of anortite in glass. Using mineralogical criteria, the temperature distribution along the vertical and horizontal sections of the furnace has been worked out (Table 2). A microscopic study of concrete specimens has confirmed the existing idea of the "peripheral flow" in the shaft furnace. It has been found that the matte-formation (Ref 5) and slag-formation reactions are most intense in the tuyere zone and in the peripheral zones of the furnace, commencing at a level 2.4 m from the tuyeres and below. In the central zone of the furnace, these reactions occur extremely slowly because of the relatively low temperatures and increase

sharply only at lower levels of the furnace.
There are 4 figures, 2 tables and 5 references,
4 of which are Soviet and 1 English.

LAPIN, V.V.; KUNAYEV, A.; KURTSEVA, N.

Mineral composition of converter slags with high manganese and vanadium contents. Vest. AN Kazakh. SSR 15 no.4:73-77 Ap '59. (MIRA 12:7)

(Slag) (Manganese oxide) (Vanadium oxide)

LAPIN, V.V.; KURTSEVA, N.N.

Process of mineral formation in the smelting of oxidized nickel ores. Trudy IGEM 42:41-50 '60. (MIRA 13:7)
(Smelting) (Nickel—Metallurgy)

LAPIN, V.V.; RABUKHIN, A.I.; CHERNYSHEV, V.V.

Effect of zirconium dioxide on the crystallization of a diopside-like cast. Izv.vys.ucheb.zav.; khim.i khim tekh. 3 no.1:193-195 '60. (MIRA 13:6)

1. Kafedra obshchey tekhnologii silikatov Moskovskogo khimiko-tekhnologicheskogo instituta imeni D.I. Mendeleyeva.
(Diopside) (Zirconium oxides)

LAPIN, V.V., retsenzent

"Album of macro- and microphotographs of refractories and raw materials used in their manufacture" by L.I.Kariakin. Reviewed by V.V.Lapin. Ogneupory 25 no.9:431-432 '60. (MIRA 13:8)
(Refractory materials) (Kariakin, L.I.)

LAPIN, V.V., doktor geol.-miner.nauk; BUZHEVICH, G.A., kand.tekhn.nauk

"Using slags as aggregates for lightweight concretes" by M.P. Klinzon. Reviewed by V.V.Lapin, G.A.Buzhevich. Bet.i zhel.-bet. no.7:336-337 Jl '60. (MIRA 13:7)
(Slag) (Lightweight concrete)

LAPIN, V.V.; KURTSEVA, N.N.; KNYAZEVA, D.N.

A new aluminous rare-earth mineral with a perovskite structure isolated from slag. Dokl. AN SSSR 134 no.5:1192-1195 O '60.
(MIRA 13:10)

1. Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii i geokhimii Akademii nauk SSSR. Predstavleno akademikom D.S.Korzhinskim.
(Rare earths) (Mineralogy)

AFANAS'YEV, G.D.; LAPIN, V.V.; TSVETKOV, A.I.

Boris Vasil'evich Ivanov; obituary. Izv. AN SSSR. Ser. geol. 25 no.2:105 F '60. (MIRA 13:10)
(Ivanov, Boris Vasil'evich, 1906-1959)

LAPIN, V.V.; KURTSEVA, N.N.; KNYAZEVA, D.N.

Britholite from cinder and gehlenite containing rare earths. Zap.-Vses.min.ob-va 90 no.6:727-731 '61. (MIRA 15:2)

1. Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii i geokhimii (IGEM) AN SSSR, Moskva.
(Gehlenite) (Britholite)

LAPIN, V. V.; VALYASHIKHINA, Ye. P.; PILOYAN, G. O.; TSVETKOV, A. I.

"On solid-phase interaction between carbonates and clay minerals during thermal analysis."

Report submitted for the International Clay Conference, Stockholm, Sweden, 12-16 Aug 63.

LAPIN, V.V.

Cold rolling of worm gears. Biul. tekh.-ekon. inform. Gos. nauch.-issl. inst. nauch. i tekh. inform. 17 no.6:51-52 Je '64.
(MIRA 17:11)

KORZHINSKIY, D.S.; ZHARIKOV, V.A.; IVANOV, I.P.; LAPIN, V.V.

Research in experimental and technical mineralogy and petrography; conference in Ivov. Vest. AN SSSR 34 no.9:127-129 S '64. (MIRA 17:10)

LAPIN, V.; PILOYAN, G.

Seventh Anniversary Conference on Experimental and Technological Mineralogy and Petrography. Izv. AN SSSR Ser. geol. 30 no.1:155-160 Ja '65 (MIRA 18:2)

TOROPOV, Nikita Aleksandrovich; BARZAKOVSKIY, Valentin Pavlovich; LAPIN, Vladimir Vasil'yevich; KURTSEVA, Nina Nikolayevna

[Constitutional diagrams of silicate systems; a handbook] Diagrammy sostoianiia silikatnykh sistem; spravochnik. Moskva, Nauka. No.1. 1965. 545 p. (MIRA 18:10)

1. Chlen-korrespondent AN SSSR (for Toropov).

LAPIN, V.V.

Thread rolling on screw parts. Trudy LPI no.243:167-172 '65.
(MIRA 18:6)

DRONOVA, M.I.; MINKOV, S.I.; LAPIN, V.V.

Closed abdominal trauma and acute appendicitis. Vest. khir. 94 no.1: 112-113 Ja '65. (MIRA 18:7)

1. Iz khirurgicheskogo otdeleniya (zav. - S.I.Minkov) Skopinskoy gorodskoy bol'nitsy Ryazanskoy oblasti.

ACC NR: AM6004712 Monograph UR/

Toropov, Nikita Aleksandrovich; Barzakovskiy, Valentin Pavlovich; Lapin, Vladimir Vasil'yevich; Kurtseva, Nina Nikolayevna

Diagrams of silicate compounds; a handbook. no. 1: Binary systems (Diagrammy sostoyaniya silikatnykh sistem; spravochnik. vyp. 1: Dvoynyye sistemy. Moscow, Izd-vo "Nauka", 65. 0545 p. illus., biblio., index. (At head of title: Akademiya nauk SSSR. Institut khimii silikatov im. I. V. Grebenshchikova) Errata slip inserted. 4,200 copies printed.

TOPIC TAGS: phase diagram, oxide system, rare earth oxide, silicate, binary oxide system, ~~metal oxide system~~ inorganic oxide, binary alloy

PURPOSE AND COVERAGE: This handbook is intended for industrial specialists, design-shop employees, and research organizations connected with the manufacture and use of materials based on oxides. The present volume contains data on binary silicate and other oxide systems which are essential in the manufacture of ceramics, refractories, electrical-engineering materials, structural and other materials. The text includes phase diagrams, stability regions of phases or individual compounds, and numerous tables. Each chapter is provided with references.

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ACC NR: AM6004712

TABLE OF CONTENTS [abridged]:

SUB CODE: 11,07/ SUBM DATE: 15Sep65/ ORIG REF: 398/ OTH REF: 831/

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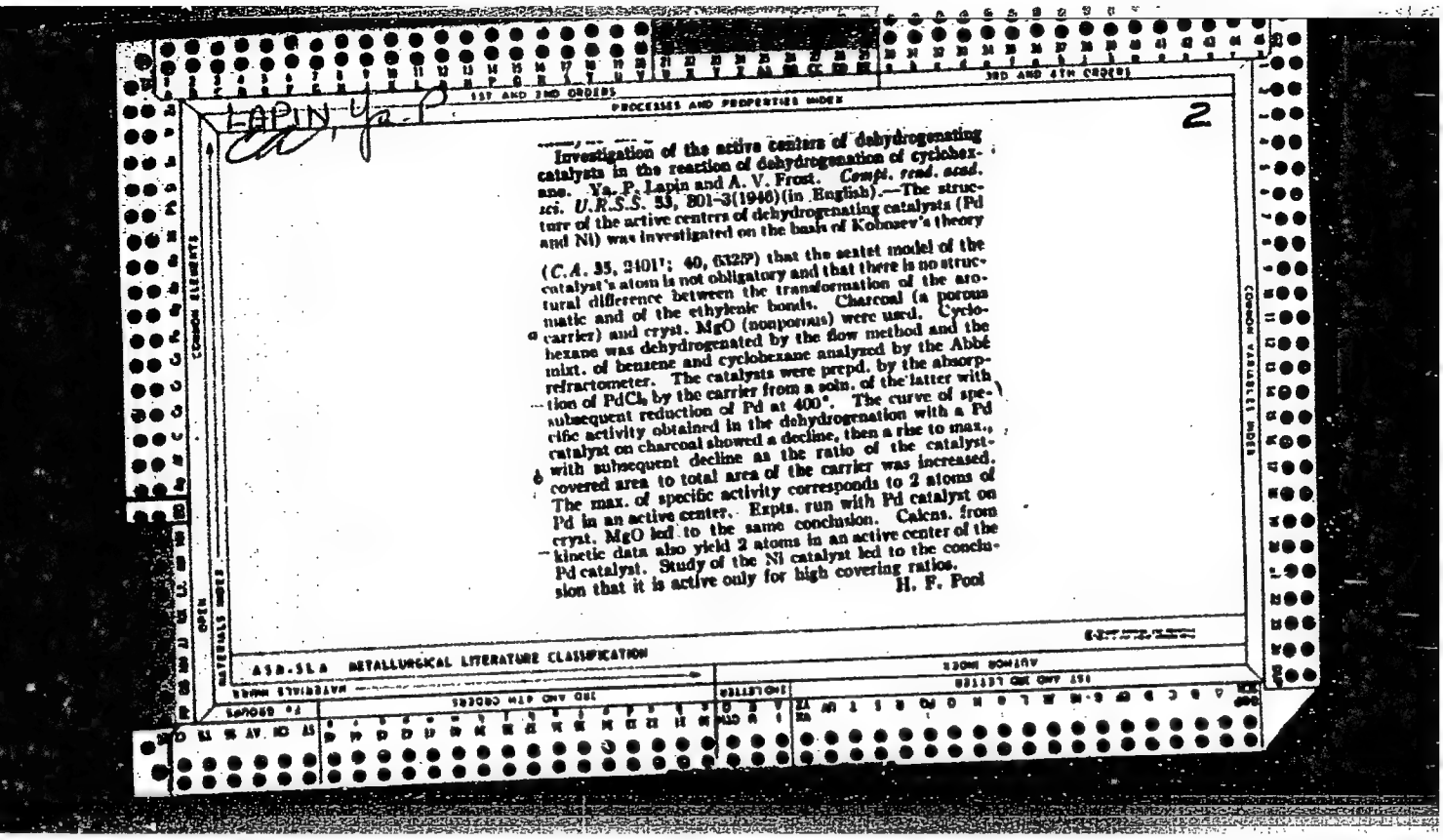

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

2

LAPIN, Ya. P.

Investigation of the active centers of dehydrogenating catalysts in the reaction of dehydrogenation of cyclohexane. Ya. P. Lapin and A. V. Frost. *Compt. rend. acad. sci. U.R.S.S.* 33, 301-3(1940)(in English).—The structure of the active centers of dehydrogenating catalysts (Pd and Ni) was investigated on the basis of Kobozev's theory (*C.A.* 35, 2401[1]; 40, 6325[7]) that the sextet model of the catalyst's atom is not obligatory and that there is no structural difference between the transformation of the aromatic and of the ethylenic bonds. Charcoal (a porous carrier) and cryst. MgO (nonporous) were used. Cyclohexane was dehydrogenated by the flow method and the mixt. of benzene and cyclohexane analyzed by the Abbé refractometer. The catalysts were prepd. by the absorption of $PdCl_2$ by the carrier from a soln. of the latter with subsequent reduction of Pd at 400°. The curve of specific activity obtained in the dehydrogenation with a Pd catalyst on charcoal showed a decline, then a rise to max., with subsequent decline as the ratio of the catalyst-covered area to total area of the carrier was increased. The max. of specific activity corresponds to 2 atoms of Pd in an active center. Expts. run with Pd catalyst on cryst. MgO led to the same conclusion. Calcns. from kinetic data also yield 2 atoms in an active center of the Pd catalyst. Study of the Ni catalyst led to the conclusion that it is active only for high covering ratios.

H. F. Pool

A58.5LA METALLURGICAL LITERATURE CLASSIFICATION

LAPIN, Ya.S.

Electrolysis of water under pressure. Khim. prom. no.8:600-607 Ag '63. (MIRA 16:12)

SEREBRENNIKOV, B.N., inzh.; LAPIN, Ye.I., inzh.

Results of static testings of an experimental pontoon of prestressed heavy reinforced concrete. Sudostroenie 29 no.9:45-48 S '63. (MIRA 16:11)

AMEL'YANOVICH, K.K., inzh.; ANTIPOV, V.A., inzh.; LAPIN, Ye.I., inzh.; SINTSOV, G.M., inzh.

Characteristics of calculating the strength of ship structures made of prestressed reinforced concrete and mesh-reinforced concrete. Sudostroenie 30 no.12:1-5 D '64. (MIRA 18:6)

LAPIN, YE. M.

PA 228T68

USSR/Engineering - Construction, Methods 2 May 52

"Utilization of Concrete Reinforcement and Mold Blocks," Ye. M. Lapin, Engr, Yuzhenergostroy Trust, Min of Elec Power Stations

"Byul Stroit Tekh" No 9, pp 3-6

Describes method for erecting concrete structures, using large prefabricated sections of reinforcement with concrete molds attached, up to 25 tons in wt. Method considerably simplifies and accelerates construction works. States that all elec power stations under construction by Yuzhenergostroy are using method described.

228T68

228T68

LAPIN, Ye. M.

USSR/Meadow Science. L.

Abs Jour : Ref Zhur - Biol., No 4, 1958, 15447

Author : Ye.M. Lapin

Inst :

Title : Methods of Setting Up Cultivated Meadows in the Arid Valley of Vologodskaya Oblast'.
(Priemy sozdaniya kul'turnykh lugov na sukhodole v Vologodskoy oblasti).

Orig Pub : Zemledeliye, 1957, No 4, 32-37

Abstract : The Vologodskaya State Selection Station set up on its plot in 1949 two year long research on methods of creating artifical meadows and methods of retaining their productivity. A part of the plot was sown with perennial grasses (grains and leguminous plants) and was used to study the effect of various fertilizers. The strong action especially of NPK and the organic-mineral fertilizers was shown on boosting the meadow yelding power.

Card 1/2

USSR/Farm Animals - General Problems. Q-1

Abs Jaur : Ref Zhur - Biol., No 13, 1958, 83270

Author : Lapin, Ye.M.

Inst : Vologda State Institute of Pedagogics.

Title : Methods of Developing Cultivated Meadows and Pastures in the North.

Orig Pub : Uch. zap. Vologodsk. gos. ped. in-ta, 1957, 20, 231-263.

Abstract : No abstract.

Card 1/1

LAPIN, Ye.M., Cand Agr Sci--(diss) "Certain methods of the establishment of cultivated meadows under conditions of Vologodskaya Oblast." Mos, 1958. 24 pp (All-Union Sci Res Inst of Fodder im V.P.Vil'yams), 150 copies (KL,49-58,125)

LAPIN, Ye.M.

Results of a comprehensive study of corn. Uch. zap. VGPI 27: 11-17 '62. (MIRA 16:8)

(Vologda Province—Corn (Maize))

LAPIN, Ye.M.

Use of composts made from surface soil layers of cattle corrals in meadow cultivation. Uch. zap. VGPI 27:363-364 '62.
(MIRA 16:8)

(Pastures and meadows—Fertilizers and manures)

LAPIN, Ye.M.

First results of observations on the dynamics of nutrients and microflora in waste lands as related to the methods used in tilling them for farm crops. Uch. zap. VGPI 27:365-370 '62.
(MIRA 16:8)

(Soil microorganisms) (Soil fertility)
(Tillage)

KOKHNOVER, F., inzh.; LAPIN, Yu., arkhitektor

Embankment of the Sura River in Penza. Zhil.-kom. khoz. 12 no.5:33 My '62. (MIRA 15:10)

(Penza--Embankments)

LAPIN, Yu.A.; ZHIROVA, L.G.; VESELOV, A.Ya.

Treatment of acute and suppurative inflammations of the female pelvis minor with tetracycline hydrochloride.
Antibiotiki 7 no.4:362-366 Ap '62. (MIRA 15:3)

1. Mediko-sanitarnaya chast' Leninogorsksvinetsstroya Vostochno-Kazakhstanskoy oblasti (glavnyy vrach A.Ya. Stremousova).
(PELVIS—DISEASES)
(TETRACYCLINE)

LAPIN, Yu.A.; MURAV'YEV, Ye.V.

Nomograph for determining the interpolating multiplier. Biul.VAGO no.32:52-54 '62. (MIRA 15:11)

1. Novosibirskoye otdeleniye Vsesoyuznogo astronomo-geodezicheskogo obshchestva.

(Nomography (Mathematics))

LAPIN, Yu.A.

Rare cases of chronic injury of the urinary tract sub coiti in vaginal aplasia. Zdrav. Kazakh. 21 no.11:72-74 '61.
(MIRA 15:7)

1. Iz zhenskoy konsul'tatsii g. Leninogorska i meditsinskoy sanitarnoy chasti Leninogorskvinetsstroya.
(VAGINA--ABNORMITIES AND DEFORMITIES)
(URETHRA--WOUNDS AND INJURIES)

UVAROV, V.V., doktor tekhn. nauk. prof.; BEKNEV, V.S., kand. tekhn. nauk; MIKHAL'TSEV, V.Ye., kand. tekhn. nauk; CHERNOBROVKIN, A.P., kand. tekhn. nauk; LAPIN, Yu.D., inzh.; CHEREPNIN, L.S., inzh.

Highly efficient gas turbine unit with 200Mw. rating. Teploenergetika 12 no.5:7-16 My '65. (MIRA 18:5)

1. Moskovskoye vysshaye tekhnicheskoye uchilishche imeni Baumana.

L 29434-66 EWT(d)/EWT(l)/EWT(m)/EWP(f)/T-2 WW

ACC NR: AP6017840 SOURCE CODE: UR/0147/66/000/002/0143/0150

AUTHOR: Ivanov, V. L.; Manushin, E. A.; Lapin, Yu. D.

ORG: none

TITLE: Some results of an experimental investigation of a cooled turbine

SOURCE: IVUZ. Aviatsionnaya tekhnika, no. 2, 1966, 143-150

TOPIC TAGS: gas turbine, high temperature turbine, turbine cooling, rotor blade, rotor blade cooling

ABSTRACT: The cooling of a high-temperature turbine rotor with a natural-convection liquid-cooling system has been investigated. The rotor blades were cooled by distilled water circulated by a high-pressure centrifugal pump. For measuring the temperature of the blades, 6 out of 30 rotor blades were equipped with three chromel-alumel thermocouples each. Water consumption and the temperature were measured in the water loop at the intake and exit from the rotor. The gas parameters were measured in front and behind the turbine. The maximum relative error in determining the temperatures of the gas and the rotor-blade surfaces was within 4%, and in estimating the gas flow rate through the turbine, 0.5%. Orig. art. has: 4 figures, 3 tables, and 6 formulas. [AV]

SUB CODE: 21 SUBM DATE: 10May65/ ORIG REF: 004/ OTH REF: 005/ ATD PRESS: 5009

Card 1/1

UDC: 621.438

L 24684-66

ACC NR: AP6015525 SOURCE CODE: UR/0096/65/000/005/0007/0016

AUTHOR: Uvarov, V. V. (Doctor of technical sciences: Professor); Beknev, V. S. (Candidate of technical sciences); Mikhal'tsev, V. Ye. (Candidate of technical sciences); Chernobrovkin, A. P. (Candidate of technical sciences); Lapin, Yu. D. (Engineer); Cherepnin, L. S. (Engineer)

ORG: MVTU im. Bauman

TITLE: High-efficiency 200 megawatt gas-turbine installation

SOURCE: Teploenergetika, no. 5, 1965, 7-16

TOPIC TAGS: gas turbine, electric power plant

ABSTRACT: The advantages of building a high pressure non-regenerative 200 megawatt gas-turbine installation with an approximate weight factor of 3.5 kg/kw are described. This factor is 2.5 times smaller than in steam gas installations and seven times smaller than in steam power installations. Calculations indicate that a gas-turbine installation requires about 50% lower capital investment as compared to a steam power installation, lowers the volume and cost of the main structure three times and the cost per kilowatt-hour not less than 15%. The possibility of building powerful gas-turbine installations with gas temperature of 750-800°C is indicated. Adoption of still higher temperature up to 1200°C, will increase the efficiency to 53-55% and double the power. Orig. art. has: 10 figures and 5 tables. [JPRS]

SUB CODE: 10 / SUBM DATE: none / ORIG REF: 006 / OTH REF: 001

Card 1/1 UDC: 621.438.001.5

ACC NR: AP7006676 (N) SOURCE CODE: UR/0145/66/000/010/0070/0072

AUTHOR: Ivanov, V. L. (Candidate of technical sciences, Lecturer); Lapin, Yu. D. (Candidate of technical sciences)

ORG: None

TITLE: Heat exchange under conditions of free convection in a section of a channel with localized resistance

SOURCE: IVUZ. Mashinsotroyeniye, no. 10, 1966, 70-72

TOPIC TAGS: convective heat transfer, flow analysis, hydraulic resistance, Nusselt number

ABSTRACT: The authors consider the characteristics of free convective heat exchange in a section of channel with local hydraulic drag (channel inlet). The fundamental relationship for this section in the case of turbulent flow conditions is

$$Nu^* = \frac{Q}{\lambda \Delta t_M D} = f(\zeta)(Gr\,Pr^*)^{0.5},$$

where λ is the coefficient of thermal conductivity for the heat-exchange medium, Q is the thermal flux in the channel, Δt_M is the variation in the average temperature of the heat-exchange medium in the input section, D is the diameter of the channel in the

 UDC: 621.438

ACC NR: AP7006676

blade, Nu* is the conditional Nusselt number, $f(\zeta)$ is a function of the coefficient of local hydraulic resistance at the channel input (ζ). It is shown that the function $f(\zeta)$ may be written as

$$f(\zeta) = f_1\left[\left(\frac{D}{d}\right)^2\right].$$

Experimental studies on stationary models confirm this relationship. Experimental data reduced to dimensionless form are satisfactorily described by the equation

$$Nu^* = \frac{Q}{\lambda \Delta t_w D} = A\,(Gr\,Pr^2)^{0.5},$$

Where A is a coefficient which depends on area ratio $\bar{F}$. Experimentally determined values of this coefficient are tabulated. The article was presented for publication by Doctor of technical sciences V. V. Uvarov, Professor at the Moscow Technical College im. N. E. Bauman. Orig. art. has: 1 figure, 1 table, 2 formulas.

SUB CODE: 20/ SUBM DATE: 30Mar66/ ORIG REF: 002

Card 2/2

VRAGOV, Yu.D.; LAPIN, Yu.E.; NEFED'YEV, V.S.

Probability method for determining speed characteristics of high-speed milling machines. Stan. i instr. 34 no.6:8-11 Je '63. (MIRA 16:7)

(Milling machines—Testing)

VRAGOV, Yu.D.; [illegible], Ye.V.; LAPIN, Yu.E.

Dynamics of a high-speed differential drive. Stan. i instr. (MIRA 18:8)
36 no.6:12-15 Je '65.

LAPIN, Yu.I., inzh.-ekonomist

Speed up the introduction of paper measuring by area. Bum. prom. 36 no.11:12-13 N '61. (MIRA 15:1)

1. Leningradskiy tekhnologicheskiy institut tsellyulozno-bumazhnoy promyshlennosti.
(Paper industry--Accounting)

LAPIN, Yu.I.

Economic efficiency of the use of automatic control instruments on papermaking machines. Trudy LTIISBP no.15:61-70 '65.
(MIRA 18:8)

2

Dehydrogenation of cyclohexane and the structure of the active centers of dehydrogenating catalysts. A. V. Frost and Ya. P. Lapin (Moscow State Univ.). *Vestnik Moskov. Univ.* 1946, 95-103.—In view of calcns., by N. I. Kobozev's theory of the active centers (K., et al., *C.A.* 36, 3725) of the no. *n* of atoms per center and of the size *p* of the migration cells, activities of Pd catalysts on various carriers were detd. as a function of the Pd content. Catalysts were prepd. by impregnating the carrier with $PdCl_2$ until colorless, filtering, drying at 120°, and reducing in a stream of H_2 at 400° 2 hrs. From the exptl. degrees of conversion *y* and the sp. surface area *s*, the degrees of coverage α and the sp. activity *a* were detd. for each catalyst and *n* and *p* were calcd. by Kobozev's formulas. Dehydrogenation was carried out at 320°, rate of flow v_0 = 0.1 ml. cyclohexane/min. (1) On active C (3 g.) with an ash content 1.4%, Pd 0.0119, 0.0043, 0.0015, 0.0008, 0.00017 g./g. C, *y* = 41, 65, 16, 5, 2.5%; with *s* = 420 sq.m./g. (by adsorption of methylene blue), the curve of *a* against α passes through an initial min. at α = 0.001, then rises to a max. at α = 0.003 and then falls; at the max., *n* = 2. The min. disappears with catalysts on low-ash (0.08%) C; with 1 g. carrier, Pd from 0.0357 to 0.0005 g./g. C, *y* from 83 to 3%; with *s* = 310 sq. m./g., *p* = 190, *n* (av.) = 1.6, *a* passes only through a max., at α = 0.0052. Hence, the min. found with the 1.4%-ash catalyst, is evidently due to the presence of two kinds of active surface. (2) On a nonporous carrier, cryst. MgO, *s* = 23.5 sq. m./g. (by adsorption of stearic acid in CCl_4), Pd from 0.0003 to 0.12 g./g. MgO, *a* max. at α = 0.0111, i.e. only one kind of active centers, *n* (av.) = 1.8, *p* = 100. (3) With the MgO catalysts, the 1st-order rate const. *k* holds at v_0 = 0.05-0.20 ml./min.; *k* = (2.3/*t*) log *a*/(*a* − *y*) where *t* = 2 v_0/v_k (2 + 3*y*)3, with v_k = vol. of catalyst; for 0.0119, 0.0014, 0.0006, and 0.0003 g. Pd/g. MgO, *k* = 0.1, 0.05, 0.01, and 0.005, resp. The curve of *a* (= *k*/α) against α, constructed with the aid of *k*, has a max. at about α = 0.015; *n* (av.) = 2.2. Thus, it is confirmed that an active center involves 2 atoms of Pd; Balandin's sextet model is not obligatory in catalytic dehydrogenation. (4) Ni catalysts on MgO were prepd. by impregnating with $Ni(NO_3)_2$, decompn. at 400°, and reduction in H_2 at 400°. Only one catalyst, contg. 1.25 g. Ni/3 g. MgO, gave *y* = 35%, the activity falling with the progress of the reaction; catalysts with 0.475 g. Ni/3 g. MgO and less were inactive. N. Thon

INST. Chemistry, Moscow State U.

LAPIN, Yu. P.

"Investigation of the Decomposition Kinetics of Acetone and Mesityl Oxide Over Transparent Aluminosilicate Catalysts." Thesis for degree of Cand. Chemical Sci. Sub. 29 Jun 49, Moscow Order of Lenin State U imeni M. V. Lomonosov.

Summary 82, 18 Dec 52, Dissertations Presented for Degrees in Science and Engineering in Moscow, in 1949. From Vechernyaya Moskva. Jan-Dec 1949.

2

CA

Rate equation of bimolecular catalytic-flow reactions and its application to a particular case. Yu. P. Lapin and A. V. Frost (M.V. Lomonosov State Univ., Moscow). *Zhur. Fiz. Khim.* 25, 971-5(1951).—For a bimol. reaction $A_1 + A_2 \rightarrow \nu_3 A_3 + \nu_4 A_4 + \ldots + \nu_i A_i$, where $\Sigma \nu_i = 2 + n$, the total no. of moles is given by $\Sigma (n_{a_1} + n_{a_2} + \ldots + n_{a_i}) = (1 + f + \delta + ny)v_0$, where v_0 is the space velocity, y the % conversion, $f = v_2/v_1$, $\delta = v_i/v_1$. On a homogeneous surface, with $f \neq 1$, the rate is given by $W = dl/dS$ [illegible] $= k\theta_1\theta_2 = k_s b_1 b_2 p_1 p_2/(1 + b_1 p_1 + b_2 p_2 + \ldots)$, where k_s is the rate const. of the surface reaction, p = partial pressures, $p_i = \nu_i y p/(1 + f + \delta + ny)$, b = adsorption coeff. Thus $W = k(1 - y)(f - y)/(1 + Dy)^2$ [illegible]; $D = (n$ [illegible] with $k = k_s b_1 b_2/(1 + f + \delta + b_1 + b_2 f + b_i \delta$ [illegible] $+ b_i)/(1 + f + \delta + b_1 + b_2 f + b_i \delta$ [illegible]. Since $S\,dl = (v_0/w)dy$; $b_1 = b_1 + b_2 + \ldots$; $b'_1 p = b_1$; $b'_0 p = b_1$; $b'_i \nu_i p = b_i$. Finally:

$$S_0 \int_0^L dl = (v_0/k) \int_0^y [(1 + Dy)^2/(1 - y)(f - y)]dy.$$

$(Sk/v_0) = D^2 y + [(1 + D)^2 \ln(1/1 - y)]/(f - 1) - [(1 + Df)^2 \ln(f/f - y)]/(f - 1)$. Similarly, on a heterogeneous surface (two types of sites): $Sk = DD' v_0 y + [n(1 + D)(1 + D')/(f - 1)] \ln(1/1 - y) - [n(1 + Df)(1 + D'f)/(f - 1)] \ln(f/f - y)$ (1). For the conversion of mesityl oxide on a SiO_2-0.16% Al_2O_3 catalyst at 275° and 300° in presence of an equal vol. of H_2O, equation (1) is applicable.

Michel Boudart

LAPIN, Yu.V. (Leningrad)

Morphogenesis of secondary calcification of the coronary arteries [with summary in English]. Arkh.pat. 21 no.1:3-9 '59. (MIRA 12:1)

1. Iz kafedry patologicheskoy anatomii (zav. - prof. M.A. Zakhar'-yevskaya) I Leningradskogo meditsinskogo instituta imeni akad. I.P. Pavlova.

(CORONARY DISEASE, pathology,
arteriosclerotic calcification (Rus))

LAPIN, Yu. V., Cand Med Sci (diss) -- "The morphogenesis of calcification on the venous arteries of the heart". Leningrad, 1960. 16 pp (First Leningrad Med Inst im Acad I. P. Pavlov), (KL, No 10, 1960, 136)